REMARKS

Claims 1-28 are pending in the application. New claims 29-48 are hereby submitted, and claims 21-28 have been hereby amended to remove reference numerals that had been included to assist the examiner in reading the claims for the first time.

Claims 1-5 and 8-21 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Zadeh et al. (U.S. Patent No. 6,266,533). In addition, claims 6 and 7 stander rejected under 35 U.S.C. § 103(a) as being directed to subject matter that is unpatentable over Zadeh in view of Lee et al. (Publication No. 20060267841).[1]

Applicants gratefully acknowledge that claims 22-28 have been allowed.

The Examiner is respectfully urged to reconsider and withdraw the rejections in view of the following remarks, and to allow all of the claims. The Examiner is invited to call applicants' attorney directly at **206.332.1384** to discuss any issues that may occur to the Examiner after reviewing the instant response.

A. Applicants' Claimed Invention

Applicants' independent claim 1 is directed to a method "for the determination of the location of a mobile station (MS) equipped with embedded GPS signal reception capability and equipped to operate within a wireless communications network." Claim 1 recites the steps of "(a) receiving GPS data . . ." and "(b) at a land station equipped with location-measurement facilities, receiving a ***communications-band signal from said MS*** to be located and u***sing the location-measurement facilities to extract location-related characteristic data from the communications-band signal***." In addition, claim 1 recites, "(c) at a land station equipped for location-determination calculations, performing location-determination calculations ***using the***

[1] The Office Action states on p. 5 that the rejection under Section 103(a) is based on the combination of Younis (Publication No. 20050003833) in view of Lee, but this appears to be a typographical error and applicants' undersigned attorney has interpreted the rejection as being based on Zadeh in view of Lee.

GPS data and the extracted location-related characteristic data to derive an estimated location for the MS."

Dependent claims 4-8 further specify that the location-related characteristic data extracted from the communications-band signal may include time of arrival (TOA) data, time difference of arrival (TDOA) data, angle of arrival (AOA) data, signal strength or propagation loss (PL), and timing advance (TA) data.

As further explained in the Summary section of applicants' specification, the claimed invention may be employed to exploit the advantages in location determination of both the GPS-based performance and the infrastructure-based performance, and to integrate the information from both types of processing to locate wireless mobile communications units. For example, in one presently preferred implementation, the method may further include providing assistance data to the MS to be located. The assistance data enables the MS to receive GPS coarse/acquisition (C/A) signals and extract TOA or pseudorange measures, which can then be communicated to the land station equipped with location-measurement facilities. Further, where the GPS data and the extracted location-related characteristic data are provided at separate land stations, these may be communicated to the land station equipped for location-determination calculations, thereby enabling the location-determination function to be carried out. These aspects of the inventive technology are addressed in dependent claims 2-3.

Similar remarks can be made (but aren't made here, for the sake of brevity) with regard to independent claim 11 and dependent claims 12-13.

B. The Prior Art

The principal reference, Zadeh, discloses a wireless communication network that provides GPS assistance data for positioning mobile units having built-in GPS receivers. These mobile devices are referred to as "GPS-MS". The disclosed system obtains a site location of the base transceiver station, or BTS, currently serving a GPS-MS to be located. It also obtains the air interface time in relation to the absolute GPS time at the BTS currently serving the GPS-MS. Using knowledge of the geographical location of the BTS currently serving the GPS-MS, range

measurement assistance data is provided with a time of calculation to the GPS-MS. This information is used by the GPS-MS to obtain GPS measurement data at the indicated time of calculation using this *a priori* information. The GPS-MS obtains GPS measurement data based on this information and returns the GPS assistance data to a mobile location center (MLC), which determines the position of the GPS-MS. The MLC has ephemeris data, and converts the air interface time to the absolute GPS time for calculation of the GPS-MS position.

C. Claims 1-5 and 8-21 Are Patentable Over Zadeh et al.

Applicants respectfully submit that the rejection over the Zadeh patent should be withdrawn, since Zadeh fails to disclose a system that extracts location-related information from a communications band signal from the MS to be located, and then calculating the MS location using both the location-related information as well as GPS data from the MS.

As discussed above, applicants' independent claims 1 and 11 recite "receiving a communications-band signal from said MS to be located and using the location-measurement facilities to extract location-related characteristic data from the communications-band signal." In addition, these claims recite "performing location-determination calculations using the GPS data and the extracted location-related characteristic data to derive an estimated location for the MS." Each of these claim recitation appears to be wholly missing from Zadeh's disclosure. Accordingly, the rejection should be withdrawn.

D. Claims 6-7 Are Patentable Over Zadeh/Lee

Applicants' claim 6 depends from claim 1 and specifies that the location-related characteristic data extracted from the communications-band signal includes angle of arrival (AOA) data. Claim 7 depends from claim 1 and specifies that the location-related characteristic data extracted from the communications-band signal includes data concerning signal strength or propagation loss (PL). We respectfully submit that these claims are directed to patentable subject matter for the reasons given above in connection with claim 1. In addition, we respectfully remind the examiner that Lee has a filing date of March 2, 2006, which is well ***after*** applicants'

filing date of December 30, 2003, and that the examiner has not shown that Lee is entitled to the earlier effective filing date, and therefore it is not clear that Lee qualifies as prior art with respect to the instant application. Accordingly, the rejection should be withdrawn.

In view of the foregoing, the examiner is respectfully urged to reconsider the application and to withdraw the rejection.

Respectfully submitted,

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/Michael D. Stein/
Michael D. Stein
Registration No. 34,734

Woodcock Washburn LLP
Cira Centre
2929 Arch Street, 12th Floor
Philadelphia, PA 19104-2891
Telephone: (215) 568-3100
Facsimile: (215) 568-3439